

Amendment to the Claims:

The claims under examination in this application, including their current status and changes made in this paper, are respectfully presented.

1 (currently amended). A method of coating an oxidized surface comprising:
reacting an active species, comprised of a constituent A and an active group X,
~~having a general formula of AX_n~~ with the oxidized surface to produce a bond between A and the oxidized surface and to form a compound having a reactive group; and
forming a coating by reacting a nucleophilic molecule, having an organic substituent not reactive with active group X, with the reactive group to form a bond between the nucleophilic molecule and A;
wherein A may be any metal, semimetal, transition metal or ceramic;
and wherein X may be any active group.

2 (original). The method of claim 1 wherein the coating is hydrophobic.

3 – 4 (canceled).

5 (previously presented). The method of claim 1, wherein the reacting of the nucleophilic molecule with the reactive group displaces the reactive group from the compound, so that the coating comprises a monolayer.

6 (original). The method of claim 1, wherein the oxidized surface is selected from the group consisting of: metals, semimetals, transition metals, ceramics, alloys thereof, and any combination thereof.

7 (canceled).

8 (original). The method of claim 1, further comprising X selected from the group consisting of: esters, amides, organic acids, phenolates, thiolates, phosphonates, and any combinations thereof.

9 (currently amended). The method of claim 1, ~~further comprising DR²~~ wherein the nucleophilic molecule is selected from the group consisting of: alcohols, amines, carboxylic acid, phenols, thiols, phosphonic acids, and any combinations thereof.

10 (canceled).

11 (original). The method of claim 1, wherein A comprises Si.

12 (previously presented). The method of claim 11, wherein the active species comprises Si(OCH₂CH₃)₄ and the nucleophilic molecule comprises an alcohol.

13 (currently amended). A method of coating an oxidized surface comprising:
reacting an active species, comprised of a constituent A, a constituent R¹, and an active group X, ~~having a general formula of AR_m⁺X_n~~ with the oxidized surface to produce a covalent bond between A and the oxidized surface and to form a compound having a reactive group; and

reacting a nucleophilic molecule, having an organic substituent not reactive with active group X, with the reactive group to form a covalent bond between the nucleophilic molecule and A, to form a coating ;

wherein A may be any metal, semimetal, transition metal or metalloid;

wherein X may be any active group;

wherein R¹ includes an organic substituent non-reactive with the active group X.

14 (original). The method of claim 13 wherein the coating is hydrophobic.

15 – 16 (canceled).

17 (previously presented). The method of claim 13, wherein the reacting of the nucleophilic molecule with the reactive group displaces the reactive group from the compound so that the coating comprises a monolayer.

18 (original). The method of claim 13, wherein the oxidized surface is selected from the group consisting of: metals, semimetals, transition metals, ceramics, alloys thereof, and any combination thereof.

19 (canceled).

20 (original). The method of claim 13, further comprising X selected from the group consisting of: esters, amides, organic acids, phenolates, thiolates, phosphonates, and any combinations thereof.

21 (currently amended). The method of claim 13, ~~further comprising DR²~~ wherein the nucleophilic molecule is selected from the group consisting of: alcohols, amines, carboxylic acid, phenols, thiols, phosphonic acids, and any combinations thereof.

22 (currently amended). The method of claim 13, further comprising reacting the nucleophilic molecule with the reactive group at a temperature above an environmental temperature to which the coating is expected to be exposed ~~in later processing~~.

23 (original). The method of claim 13, wherein A comprises Si.

24 (previously presented). The method of claim 23, wherein the active species comprises Si(OCH₂CH₃)₄ and the nucleophilic molecule comprises an alcohol.

25 (currently amended). A method of coating an oxidized surface comprising:
reacting an active species, comprised of Si and an active group X, ~~having a general formula of SiX_n~~ with the oxidized surface to produce a bond between Si and the oxidized surface and to form a compound having a reactive group; and
forming a coating by reacting a nucleophilic molecule, having an organic substituent not reactive with active group X, with the reactive group to form a bond between the nucleophilic molecule and Si;
wherein X may be any active group.

26 (previously presented). The method of claim 25, wherein the active species comprises $\text{Si}(\text{OCH}_2\text{CH}_3)_4$ and the nucleophilic molecule comprises an alcohol.